

Assignment

Date _____ Period _____

For each problem, approximate the area under the curve over the given interval using 4 left endpoint rectangles.

1) $y = -\frac{x^2}{2} + x + 5; [-1, 3]$

2) $y = -\frac{x}{2} + 6; [1, 5]$

For each problem, approximate the area under the curve over the given interval using 4 midpoint rectangles.

3) $y = \frac{3}{x}; [1, 3]$

4) $y = \frac{x^2}{2} + 1; [0, 2]$

For each problem, approximate the area under the curve over the given interval using 4 right endpoint rectangles.

5) $y = \frac{x^2}{2} + x + 1; [-4, 0]$

6) $y = -x + 3; [-2, 2]$

For each problem, approximate the area under the curve over the given interval using 4 trapezoids.

7) $y = \frac{x^2}{2} + x + 2; [-4, -2]$

8) $y = x^2 + 4; [-2, 2]$

For each problem, use a left-hand Riemann sum to approximate the integral based off of the values in the table.

9) $\int_0^3 f(x) dx$

x	0	4	7	8	11	13
$f(x)$	4	6	5	3	5	6

For each problem, use a right-hand Riemann sum to approximate the integral based off of the values in the table.

10) $\int_0^1 f(x) dx$

x	0	4	8	9	10	11
$f(x)$	5	7	6	8	6	5